	Application No.	**Applicant(s)**
Notice of Allowability	10/693,736	YUAN ET AL.
	Examiner	**Art Unit**	
	CHAU NGUYEN	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to _02/06/2008_.

2. ☒ The allowed claim(s) is/are _1,9,10,19,20,28,35,36 and 40-42_.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

        a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

           1. ☐ Certified copies of the priority documents have been received.

           2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

           3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _03/17/2008_

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _04/23/08_ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

/Rachna S Desai/
Primary Examiner, Art Unit 2176

<div align="center">**EXAMINER'S AMENDMENT**</div>

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Stephen Perry, Registration No. 32,107 and Joseph Sauer, Registration No. 47,919 on 04/23/2008.

The application has been amended as follows:

1. (Currently Amended) A computer implemented method of generating summary information for an electronic document for use by a mobile communication device, comprising:

receiving a request from a user of the mobile communication device for document summary information of the electronic document;

~~analyzing one of a content structure or content properties within an electronic document;~~

determining whether the electronic document is a structured document, an unstructured document or unformatted document;

generating the document summary information which includes an assemblage of a plurality of summary entries selected from the contents of the electronic document based on the ~~analysis of content structure or content properties~~ determining step, wherein ~~said~~ the generating document summary information includes determining: ~~if the electronic document has a predetermined content structure and in response selecting the plurality of summary entries from~~

~~the electronic document based on the predetermined content structure; and otherwise if the~~ ~~electronic document has content properties, selecting the plurality of summary entries from the~~ ~~electronic document based on differences in the content properties;~~

if the electronic document is a structured document by examining whether the electronic document contains content structure which includes a table of content, a plurality of spreadsheet worksheets, and/or a plurality of document pages,

for the electronic document containing a table of content, selecting the plurality of summary entries from the electronic document based on top level entries of the table of content,

for the electronic document containing a plurality of spreadsheet worksheets, selecting the plurality of summary entries from the electronic document containing one entry for each worksheet in the spreadsheet document, and

for the electronic document containing a plurality of document pages, selecting a plurality summary entries which correspond to contiguous ranges of pages in the electronic document;

if the electronic document is an unstructured document by examining changes in formatting of text in the electronic document, wherein the formatting of text includes font properties, paragraph alignment and indentation, and text properties, selecting the plurality of summary entries from the electronic document based on the examining changes in the formatting of text, and wherein the font properties includes font names, text font sizes, text font weights, and text font styles;

~~otherwise if the electronic document is an unformatted document by examining paragraph sizes and paragraph text patters, selecting the plurality of summary entries from the electronic document based on the examining paragraph sizes and paragraph text patterns; and~~

~~wherein said content properties are selected from the group consisting of text formatting, paragraph alignments or indents, and paragraph sizes, and said analyzing content properties comprises identifying differences in at least one of said text formatting, paragraph alignments or indents, and paragraph sizes;~~

~~wherein said analyzing content structure comprises identifying at least one of a table of contents in the electronic document, a plurality of spreadsheet worksheets in the electronic document, and a plurality of document pages in the electronic document; and~~

providing the document summary information for ~~a~~ the mobile communication device.

Claims 2-8 (Cancelled)

9. (Currently Amended) The computer implemented method of claim 1, wherein the summary information is provided to the mobile communication device without the electronic document.

10. (Currently Amended) A computer program product, comprising:

a computer storage medium;

computer program instructions stored on the computer storage medium;

the computer program instructions being executable on a processor for generating document summary information for an electronic document by:

receiving a request from a user of a mobile communication device for the document summary information of the electronic document;

~~analyzing one of a content structure or content properties within an electronic document;~~

determining whether the electronic document is a structured document, an unstructured document or unformatted document;

generating the document summary information which includes an assemblage of a plurality of summary entries selected from the contents of the electronic document based on the ~~analysis of content structure or content properties~~ determining step, wherein ~~said~~ the generating document summary information includes determining: ~~if the electronic document has a predetermined content structure and in response selecting the plurality of summary entries from the electronic document based on the predetermined content structure; and otherwise if the electronic document has content properties, selecting the plurality of summary entries from the electronic document based on differences in the content properties;~~

if the electronic document is a structured document by examining whether the electronic document contains content structure which includes a table of content, a plurality of spreadsheet worksheets, and/or a plurality of document pages,

for the electronic document containing a table of content, selecting the plurality of summary entries from the electronic document based on top level entries of the table of content,

for the electronic document containing a plurality of spreadsheet worksheets, selecting the plurality of summary entries from the electronic document containing one entry for each worksheet in the spreadsheet document, and

for the electronic document containing a plurality of document pages, selecting a plurality summary entries which correspond to contiguous ranges of pages in the electronic document;

if the electronic document is an unstructured document by examining changes in formatting of text in the electronic document, wherein the formatting of text includes font properties, paragraph alignment and indentation, and text properties, selecting the plurality of summary entries from the electronic document based on the examining changes in the formatting of text, and wherein the font properties includes font names, text font sizes, text font weights, and text font styles;

otherwise if the electronic document is an unformatted document by examining paragraph sizes and paragraph text patters, selecting the plurality of summary entries from the electronic document based on the examining paragraph sizes and paragraph text patterns; and

~~wherein said content properties are selected from the group consisting of text formatting, paragraph alignments or indents, and paragraph sizes, and said analyzing content properties comprises identifying differences in at least on of said text formatting, paragraph alignments or indents, and paragraph sizes;~~

~~wherein said analyzing content structure comprises identifying at least one of a table of contents in the electronic document, a plurality of spreadsheet worksheets in the electronic document, and a plurality of document pages in the electronic document; and~~

providing the document summary information for ~~a~~ the mobile communication device.

Claims 11-18 (Cancelled)

Claim 19 (Currently Amended) A ~~computer implemented~~ method of generating summary information for an electronic document, comprising:

identifying an electronic document ~~for which to generate summary information having a plurality of summary entries~~ to determine whether the electronic document is a structured document, an unstructured document or unformatted document;

generating document summary information having a plurality of summary entries selected from contents of the electronic document based on the determining step, wherein ~~in~~ the ~~generation~~ generating ~~of the~~ document summary information includes determining:

~~if the electronic document has a predetermined content structure, selecting the plurality of summary entries from the electronic document based on the predetermined content structure; and otherwise, if the electronic document has content properties, wherein said content properties are selected from the group consisting of text formatting, paragraph alignments or indents, and paragraph sizes,~~

~~selecting the plurality of summary entries form the electronic document based on differences in the content properties;~~

~~wherein the differences in the content properties comprises differences in at least one of text formatting, paragraph alignments or indents, and paragraph sizes, and wherein the~~

predetermined content structure comprises at least one of a table of contents, a plurality of spreadsheet worksheet, and a plurality of document pages of a portable document format.

if the electronic document is a structured document by examining whether the electronic document contains content structure which includes a table of content, a plurality of spreadsheet worksheets, and/or a plurality of document pages,

for the electronic document containing a table of content, selecting the plurality of summary entries from the electronic document based on top level entries of the table of content,

for the electronic document containing a plurality of spreadsheet worksheets, selecting the plurality of summary entries from the electronic document containing one entry for each worksheet in the spreadsheet document, and

for the electronic document containing a plurality of document pages, selecting a plurality summary entries which correspond to contiguous ranges of pages in the electronic document;

if the electronic document is an unstructured document by examining changes in formatting of text in the electronic document, wherein the formatting of text includes font properties, paragraph alignment and indentation, and text properties, selecting the plurality of summary entries from the electronic document based on the examining changes in the formatting of text, and wherein the font properties includes font names, text font sizes, text font weights, and text font styles;

otherwise if the electronic document is an unformatted document by examining paragraph sizes and paragraph text patters, selecting the plurality of summary entries from the electronic document based on the examining paragraph sizes and paragraph text patterns.

Claim 20 (Original) The method of claim 19, further comprising: providing the summary information in response to a request for the electronic document by a mobile communication device.

Claims 21-27 (Cancelled)

Claim 28 (Currently Amended) A server for generating summary information for electronic documents, comprising:

a memory;

a document service process for receiving a request from a user of a mobile communication device for document summary information of an electronic document;

a structured document summarization process which generates summary information by selecting a plurality of summary entries from an electronic document based on a predetermined content structure identified in the electronic document; and for determining whether an electronic document is a structured document by examining whether the electronic document contains content structure which includes a table of content, a plurality of spreadsheet worksheets, and/or a plurality of document pages,

for the electronic document containing a table of content, selecting the plurality of summary entries from the electronic document based on top level entries of the table of content,

for the electronic document containing a plurality of spreadsheet worksheets, selecting the plurality of summary entries from the electronic document containing one entry for each worksheet in the spreadsheet document, and

for the electronic document containing a plurality of document pages, selecting a plurality summary entries which correspond to contiguous ranges of pages in the electronic document;

an unstructured document summarization process for determining whether an electronic document is an unstructured document by examining changes in formatting of text in the electronic document, wherein the formatting of text includes font properties, paragraph alignment and indentation, and text properties, selecting the plurality of summary entries from the electronic document based on the examining changes in the formatting of text, and wherein the font properties includes font names, text font sizes, text font weights, and text font styles;

an unformatted document summarization process for determining whether an electronic document is an unformatted document by examining paragraph sizes and paragraph text patters, selecting the plurality of summary entries from the electronic document based on the examining paragraph sizes and paragraph text patterns;

wherein the generating document summary information includes an assemblage of a plurality of summary entries selected from contents of the electronic document based on the

determination whether the electronic document is a structured document, an unstructured document or an unformatted document; and

the document service process for transmitting the document summary information to the mobile communication device.

~~a formatted document summarization process which generates summary information by selecting a plurality of summary entries from an electronic document based on differences in content formatting identified in the electronic document, wherein said content formatting is selected from the group consisting of text formatting, paragraph alignments or indents, and paragraph sizes, and wherein said differences in content formatting include differences in at least one of text formatting, paragraph alignments or indents, and paragraph sizes, and wherein the predetermined content structure comprises at least one of a table of contents, a plurality of spreadsheet worksheets, and a plurality of document pages.~~

Claims 29-34 (Cancelled)

Claim 35 (Currently Amended) A system which facilitates the communication of summary information for electronic documents to mobile communication devices, comprising:

a server having: ~~a structured document summarization process which generates summary information by selecting a plurality of summary entries from an electronic document based on a predetermined content structure identified in the electronic document, wherein the predetermined content structure comprises at least one of a table of contents, a plurality of spreadsheet worksheets, and a plurality of document pages, and having~~ a formatted document summarization

~~process which generates summary information by selecting a plurality of summary entries from~~

~~an electronic document based on differences in content formatting identified in the electronic~~

~~document, wherein said content formatting is selected from the group consisting of text~~

~~formatting, paragraph alignments or indents, and paragraph sizes, and wherein said differences in~~

~~content formatting include differences in at least one of text formatting, paragraph alignments or~~

~~indents, and paragraph sizes; and~~

a memory;

a structured document summarization process for determining whether an electronic

document is a structured document by examining whether the electronic document contains

content structure which includes a table of content, a plurality of spreadsheet worksheets, and/or

a plurality of document pages,

for the electronic document containing a table of content, selecting the plurality of

summary entries from the electronic document based on top level entries of the table of

content,

for the electronic document containing a plurality of spreadsheet worksheets,

selecting the plurality of summary entries from the electronic document containing one

entry for each worksheet in the spreadsheet document, and

for the electronic document containing a plurality of document pages, selecting a

plurality summary entries which correspond to contiguous ranges of pages in the

electronic document;

an unstructured document summarization process for determining whether an electronic

document is an unstructured document by examining changes in formatting of text in the

electronic document, wherein the formatting of text includes font properties, paragraph alignment and indentation, and text properties, selecting the plurality of summary entries from the electronic document based on the examining changes in the formatting of text, and wherein the font properties includes font names, text font sizes, text font weights, and text font styles;

an unformatted document summarization process for determining whether an electronic document is an unformatted document by examining paragraph sizes and paragraph text patters, selecting the plurality of summary entries from the electronic document based on the examining paragraph sizes and paragraph text patterns;

wherein the generating document summary information includes an assemblage of a plurality of summary entries selected from contents of the electronic document based on the determination whether the electronic document is a structured document, an unstructured document or an unformatted document; and

a wireless communication network which communicates the document summary information to a mobile communication device in response to a request for the electronic document.

Claim 36 (Currently Amended) The system of claim 35, further comprising: a the mobile communication device which receives the document summary information in response to the request for the electronic document.

Claim 37-39 (Cancelled)

Claim 40 (Currently Amended) The <u>computer implemented</u> method of claim 1, wherein said selecting the plurality of summary entries from the electronic document based on differences in ~~the~~ content properties comprises determining if the content properties include at least one of text formatting, paragraph alignments or indents and in response selecting the plurality of summary entries based on differences in said at least one of text formatting, paragraph alignments or indents; and otherwise selecting the plurality of summary entries based on differences in said paragraph sizes.

Claim 41 (Currently Amended) The computer program product of claim 10, wherein said selecting the plurality of summary entries from the electronic document based on differences in ~~the~~ content properties comprises determining if the content properties include at least one of text formatting, paragraph alignments or indents and in response selecting the plurality of summary entries based on differences in said at least one of text formatting, paragraph alignments or indents; and otherwise selecting the plurality of summary entries based on differences in said paragraph sizes.

Claims 42 (Currently Amended) The ~~computer implement~~ method of claim 19, wherein said selecting the plurality of summary entries from the electronic document based on differences in ~~the~~ content properties comprises determining if the content properties include at least one of text formatting, paragraph alignments or indents and in response selecting the plurality of summary entries based on differences in said at least one of text formatting,

paragraph alignments or indents; and otherwise selecting the plurality of summary entries based

on differences in said paragraph sizes.

REASONS FOR ALLOWANCE

1.   Claims 1, 9-10, 19-20, 28, 35-36 and 40-42 are allowed.

2.   The following is a statement of reasons for the indication of allowable subject matter:

        In interpreting the claims in light of the specification, applicant's arguments and amendments, the Examiner finds the claimed invention is patentable distinct from the prior art of record.

3.   The prior art of record includes Reiley et al. (Reiley), US Patent Application Publication No. US 2002/0016801, Bourbakis et al. (Bourbakis), US Patent Application Publication No. US 2003/0145279, and Whitledge et al. (Whitledge), US Patent No. 6,925,595.

        Reiley discloses on page 2, paragraph [0015]: parsing a web document (electronic document) to create a data structure comprised of hierarchical organization of elements and conducting analysis of elements in the data structure. Reiley further discloses on page 6, paragraph [0065], page 7, paragraphs [0082]-[0083], page 8, paragraph [0089] and page 9, paragraph [0110]: after the analysis is complete, the content of the web document is passed to the transformer, which then reorganizes, summarizes, and removes information, where appropriate, from the hierarchical structure. Reiley further discloses on page 2, paragraph [0017]: a content transformer transforms a Web document by performing an analysis of the elements of the Web document, the analysis taking into account a structural arrangement of the elements, and rearranges (summaries) the elements as a result of the analysis to generate a hierarchical data structure that represents the web document, and on page 7, paragraph [0082]: the hierarchical structure represents a general summary or table of contents for the content of the web document

(electronic document). Reiley further discloses on page 3, paragraphs [0038]-[0041]: the web page (electronic document) is divided into several elements including headings, paragraphs, lists, separators, graphics, tables, table item, etc…and these are content properties, and the transformer uses analysis rule to categorize the elements; page 7, paragraph [0083]: the content transformer divides the content into discrete data pieces or fragments, the data pieces or organized (summarized) according to the transformed hierarchy, i.e., discrete piece of data could be a page of text that corresponds to a level from the transformed hierarchy, wherein the text represents a portion of the original web page. In addition, Reiley discloses on col. 7, paragraphs [0077]-[0078]: identifying nodes (content elements) that associated with bolded text (text formatting) or nodes associated with text of a particular length (paragraph size), and identifying a group of nodes that associate with patterns of text (text formatting) and page 8, paragraph [0089]: identifying the top level nodes of the content of the web page, the top level nodes would represent a summary of the contents (table of contents) of the web page.

Bourbakis discloses a method for reconstructing new document from a group of old ones by analyzing paragraphs of the group to extract important statistical feature such as the size of the paragraphs in text characters (Abstract and page 2, paragraph [0024]).

Whitledge discloses converting electronic document for a PDA, the PDA display has less than SuperVGA resolution and is grayscale, the display font for the text displayed has been changed to Arial (col. 23, lines 1-29 and Figures 8A&8B).

Claim 1 is allowed because the prior art of record does not expressly disclose alone or in combination determining whether the electronic document is a structured document, an

unstructured document or unformatted document; generating the document summary information which includes an assemblage of a plurality of summary entries selected from the contents of the electronic document based on the determining step, wherein the generating document summary information includes determining: if the electronic document is a structured document by examining whether the electronic document contains content structure which includes a table of content, a plurality of spreadsheet worksheets, and/or a plurality of document pages, and

for the electronic document containing a table of content, selecting the plurality of summary entries from the electronic document based on top level entries of the table of content,

for the electronic document containing a plurality of spreadsheet worksheets, selecting the plurality of summary entries from the electronic document containing one entry for each worksheet in the spreadsheet document,

for the electronic document containing a plurality of document pages, selecting a plurality summary entries which correspond to contiguous ranges of pages in the electronic document;

if the electronic document is an unstructured document by examining changes in formatting of text in the electronic document, wherein the formatting of text includes font properties, paragraph alignment and indentation, and text properties, selecting the plurality of summary entries from the electronic document based on the examining changes in the formatting of text, and wherein the font properties includes font names, text font sizes, text font weights, and text font styles;

otherwise if the electronic document is an unformatted document by examining paragraph sizes and paragraph text patters, selecting the plurality of summary entries from the electronic document based on the examining paragraph sizes and paragraph text patterns.

Claims 9-10, 19-20, 28, 35-36 and 40-42 are allowed for the same reasons set forth for claim 1.

4.   Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau Nguyen whose telephone number is (571) 272-4092. The Examiner can normally be reached on Monday-Friday from 8:30 am to 5:30 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Doug Hutton, can be reached at (571) 272-4137.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. On July 15, 2005, the Central Facsimile (FAX) Number will change from 703-872-9306 to 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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